IS THE JENNY ABLE TO MAINTAIN THE FERTILITY AT AN OLDER AGE THAN THE MARE DOES?

THE ROLE OF THE HISTOLOGICAL EVOLUTION OF THE ENDOMETRIUM

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INTRODUCTION

- It is said that jennies are able to maintain the fertility at an older age than mares do, but this is a widely spread affirmation that has never been scientifically proved.
- Some studies demonstrate that the histological evolution of the endometrium through the years differs in these two species and there is a relationship between this fact and the capacity to gestate.

OBJECTIVES

To study the capacity of the jennies to conceive for more years than the mare

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To compare the histological differences of the endometrium between jennies and mares

MATERIALS & METHODS

DATA

WHO? → Catalan jennies from 1 to 29 years old

WHERE? → Animal breeding area of Fuives (Olvan, Barcelona, Spain)

The uterine biopsies were collected in 2018 to perform previous studies and they have been reused for this one.

Bibliographic research

Statistical analysis — n=704

Histological analysis — n=22

Data collection from 2000 to 2020

Summarizing with Excel

Analysis with Excel

Graphics construction with Excel

Draw conclusions

Non pregnant jennies uterine biopsies

Immersion in formaldehyde for paraffin blocks

Staining with hematoxylin and eosin (H/E)

Evaluation by light microscopy

Classification using Kenney and Doig's classification

RESULTS

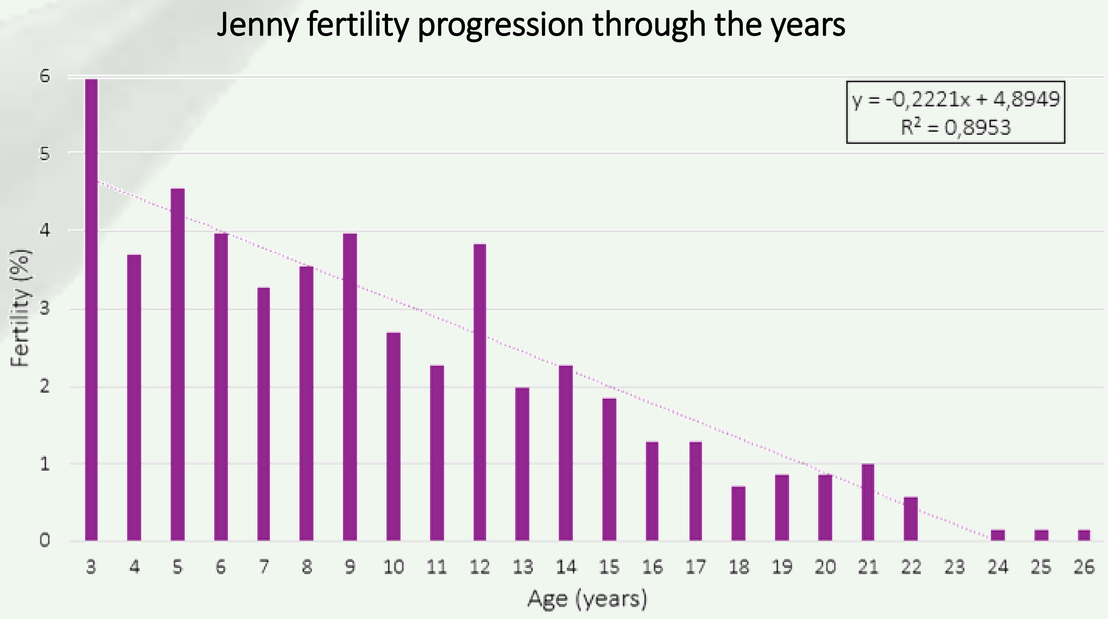

Figure 1. The percentage representing each age range within the total fertility of the herd.

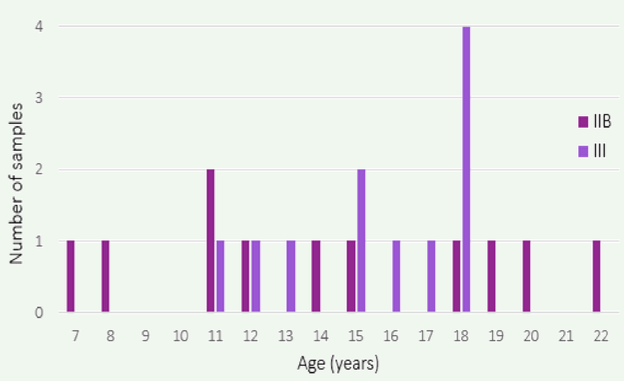

Figure 2. Classification of the jennies' endometrial samples depending on age, according to Kenney and Doig's classification.

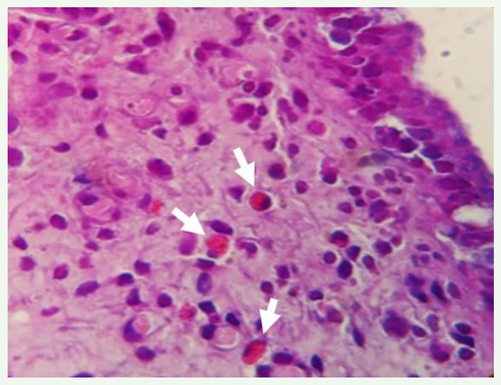

Figure 3. Jenny's endometrium biopsy section in estrus with H/E staining. Classified as III according to Kenney and Doig's classification. Eosinophils are indicated (white arrows).

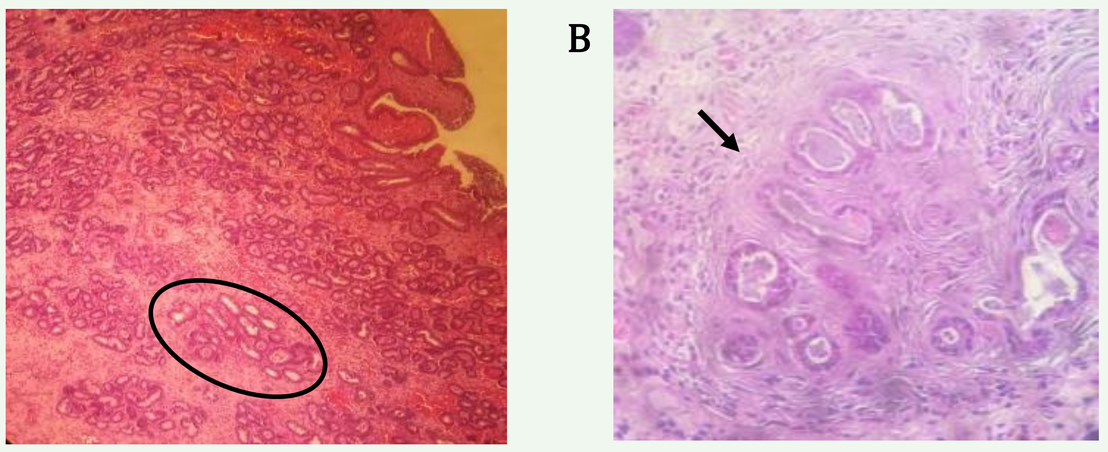

Figure 4. Jenny's endometrial biopsy sections taken in estrus with H/E staining classified as IIB (A) and III (B) according to the Kenney and Doig's classification. Glandular nests are shown in both images (black circle and arrow).

CONCLUSIONS

- Jenny is able to maintain the fertility at an older age than the mare is.
- Fertility in both species starts to decrease at the same age.
- Histological differences between jennies and mares are important to understand fertility rates.

FUTURE PROJECTS

- More studies about the role of eosinophils in jenny's endometrium are needed.
- Other pregnancy parameters, such as abortion or perinatal death, should be taken into account in a future project.
- More data from Portugal will complement this study.

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